

## REMARKS

Claims 1-8 and 16-21 are pending in the application. Claims 1-8 and 16-21 have been rejected under 35 U.S.C. §103(a) as being deemed unpatentable over U.S. Patent No. 7,106,833 (Kerpez) in view of Hightower et al. (U.S. Patent No. 5,496,966). Of the Claims, Claims 1 and 16 are independent. The application as argued herein, is believed to overcome the rejections.

### Regarding Rejections under 35 U.S.C. § 103(a)

Claims 1-8 and 16-21 have been rejected under 35 U.S.C. §103(a) as being deemed unpatentable over U.S. Patent No. 7,106,833 (Kerpez) in view of Hightower et al. (U.S. Patent No. 5,496,966).

Cited prior art Kerpez discusses optimizing DSL lines transmitting in the same cable on an individual basis in order to maximize the overall throughput in a cable. (*See* col. 3, lines 30 to col. 4, line 38.)

Cited prior art Hightower discusses control of an electromagnetic signal propagation environment within a bounded area (business office environment or a residential environment) for a wireless communication through the use of standard building materials modified to possess selected electromagnetic characteristics. Building materials including conductive, absorptive, reflective or frequency selective electromagnetic characteristics are used in an enclosure (business office environment or a residential environment) to prevent electromagnetic interference signals from entering the enclosure or to prevent signals generated by the enclosed communications system from exiting the enclosure. (*See*, Abstract.)

An embodiment of the Applicant's invention is directed to solving the problem of reducing unacceptable levels of electromagnetic interference (EMI) in areas occupied by other users "without the need to incur shielding costs or additional shielding costs". (*See*, for example, Page 15, paragraph [0040].) As used in the application EMI refers to "interference that may potentially disrupt, degrade or otherwise interfere with electromagnetic radiation emitted within one or more regions of an electromagnetic spectrum". (*See*, for example, Page 8, paragraph [0020].)

As recited in independent Claim 1, instead of reducing an unacceptable level of EMI through physical means, for example, by adding shielding, “if the device emits EMI in one or more regions of the electromagnetic spectrum occupied by other users” EMI emitted by a device is altered by “reducing the EMI in the one or more regions; and increasing the EMI in one or more other regions of the electromagnetic spectrum that are unoccupied by the other users”.

To establish a prima facie case for obviousness under 35 U.S.C. 103(a), (1) there must be some suggestion or motivation to combine reference teachings; (2) there must be a reasonable expectation of success; (3) the references when combined must teach or suggest all the claim limitations. For the reasons discussed below, it is respectfully submitted that the Office has not established a prima facie case under 35 U.S.C. 103(a) for claims 1-8 and 16-21 and that therefore, claims 1-25 are allowable.

The references when combined do not teach or suggest all the claim limitations.

Cited art Hightower is concerned with shielding a bounded region operating at a certain frequency range so that communication inside the bounded region does not interfere with communication outside the bounded area at the same frequency range and vice versa. This is not the same as whether a device emits EMI in a particular region of a spectrum, where the Applicant’s specification defines EMI as “interference that may potentially disrupt, degrade or otherwise interfere with electromagnetic radiation emitted within one or more regions of an electromagnetic spectrum”. (See, for example, Page 8, paragraph [0020] of the Applicant’s specification as originally filed.)

Hightower does not teach or suggest at least:

“increasing the EMI in one or more other regions of the electromagnetic spectrum that are unoccupied by the other users”

as claimed by the Applicant in Claim 1.

In contrast, Hightower merely discusses how to select building components with absorptive electromagnetic characteristics to prevent entrance/exit of signals of a certain frequency range. Hightower’s discussion of a band-reject filter formed by building components

to prevent entrance/exit of signals of a certain frequency range merely discusses management of signals of a certain frequency range through physical remediation irrespective as to whether a signal is in one or more regions of an electromagnetic spectrum unoccupied by others.

Furthermore, the selection of absorptive electromagnetic characteristics of a building component does not teach or suggest how to alter EMI emitted by a device so as not to interfere with communication channels used by other devices “if it is determined that the device emits EMI in one or more regions of the electromagnetic spectrum occupied by other users: reducing the EMI in the one or more regions; and increasing the EMI in one or more other regions of the electromagnetic spectrum that are unoccupied by the other users. (See, Applicant’s Specification, Page 11, paragraph [0029].)

Kerpez does not teach or suggest at least:

“if a device emits electromagnetic interference (EMI) in one or more regions of an electromagnetic spectrum occupied by others”

as claimed by the Applicant in Claim1.

In contrast Kerpez merely discusses the reduction or elimination of any detected EMI irrespective as to as to whether it is “in one or more regions of an electromagnetic spectrum occupied by others”.

Therefore, separately or in combination, Kerpez and Hightower do not teach or suggest the Applicant’s claimed invention. Even if combined, the present invention as now claimed does not result as argued above.

There is no suggestion or motivation to combine reference teachings of Kerpez and Hightower

Kerpez and Hightower are non-analogous prior art. Kerpez is directed to optimizing performance of digital subscriber lines (DSL) in a cable. Hightower is directed to re-use of wireless spectrum inside and outside a bounded region. One skilled in the art of DSL would not look to wireless communication systems for “reducing the EMI in the one or more regions; and

increasing the EMI in one or more other regions of the electromagnetic spectrum that are unoccupied by the other users optimize performance of DSL lines in a cable.”

Claims 2-8 are dependent claims that depend directly or indirectly on claim 1, which has been shown to be distinguished over the cited art. Independent claim 16 recites a like distinction and is thus distinguished over the cited art. Claims 17-21 depend directly or indirectly on claim 16 and are thus distinguished over the cited reference.

Accordingly, the present invention as now claimed is not believed to be made obvious by the cited reference. Removal of the rejections under 35 U.S.C. § 103(a) and acceptance of claims 1-8 and 16-21 is respectfully requested.

CONCLUSION

In view of the foregoing, it is submitted that all claims (claims 1-8 and 16-21) are in condition of allowance. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the above-referenced application.

Please charge any shortages and credit any overcharges to Deposit Account Number 50-0221.

Respectfully submitted,

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